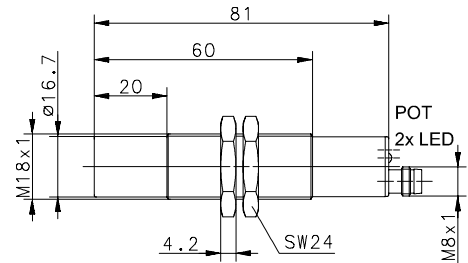
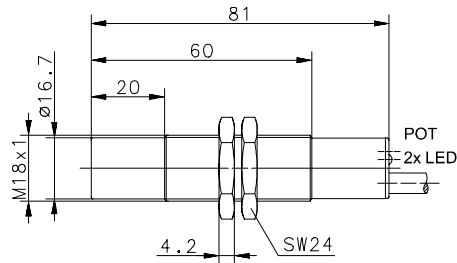


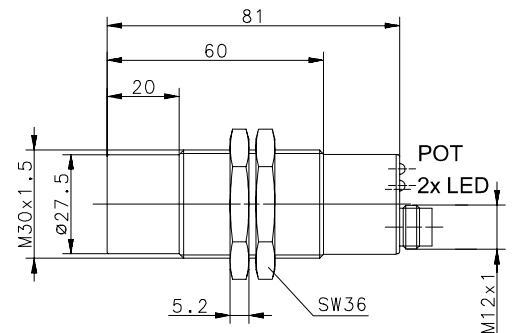
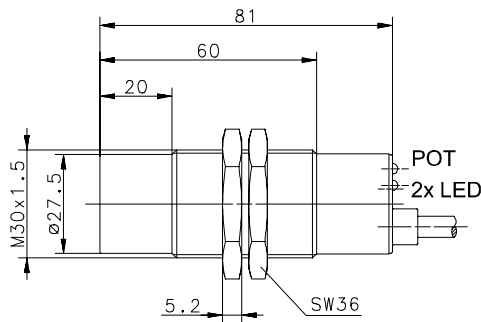
# Technical Data

## Capacitive Proximity Switch

### Series M18, M30, Ø20 and Ø34 non flush - DC



Mounting non flush	Type M18x1 Enclosure: plastic			
	2m cable		M8 male plug	
S <sub>n</sub>	8mm			
S <sub>r</sub>	1-8mm			
Output	N.O.	N.C.	N.O.	N.C.
NPN	6507321723	6507121722	6507321002	6507121002
PNP	6507921724	6507721001	6507921002	6507721002

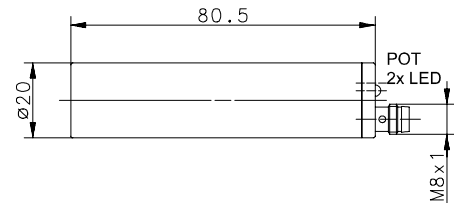
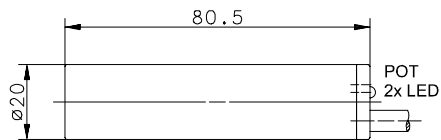


Mounting non flush	Type M30x1,5 Enclosure: plastic			
	2m cable		M12 male plug	
S <sub>n</sub>	20mm			
S <sub>r</sub>	5-20mm			
Output	N.O.	N.C.	N.O.	N.C.
NPN	6507323001	6507123001	6507323004	6507123004
PNP	6507923727	6507723001	6507923004	6507723004

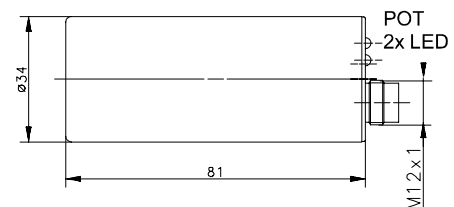
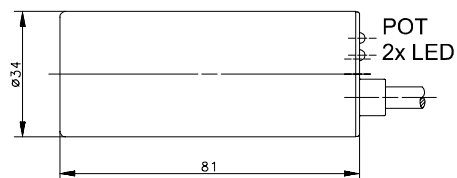
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# Technical Data

## Capacitive Proximity Switch



Mounting non flush	Series Ø20 Enclosure: plastic			
	2m cable		M8 male plug	
S <sub>n</sub>	15mm			
S <sub>r</sub>	3,5-15mm			
Output	N.O.	N.C.	N.O.	N.C.
NPN	6507310002	6507110001	6507310004	
PNP	6507910001	6507710001	6507910004	6507710004



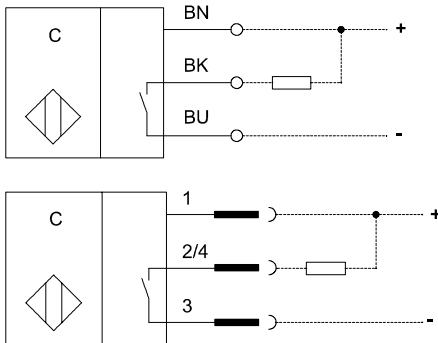
Mounting non flush	Series Ø34 Enclosure: plastic			
	2m cable		M12 male plug	
S <sub>n</sub>	30mm			
S <sub>r</sub>	6-30mm			
Output	N.O.	N.C.	N.O.	N.C.
NPN	6507315001	6507115001	6507315004	6507115004
PNP	6507915001	6507715154	6507915004	6507715004

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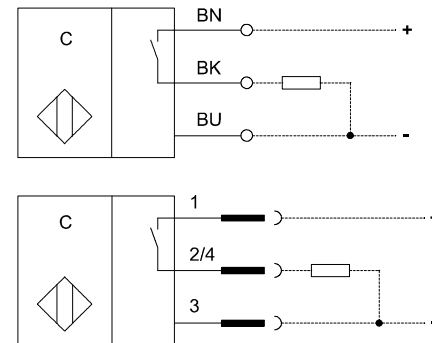
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### Wiring diagrams NPN and PNP normally open / N.O.

NPN - Proximity Switch

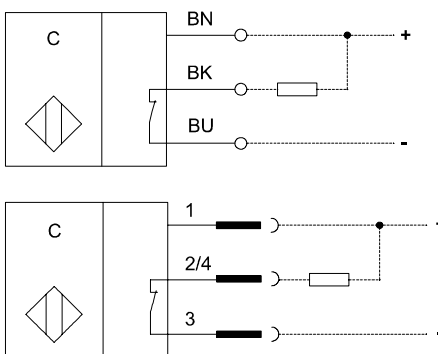


PNP - Proximity Switch

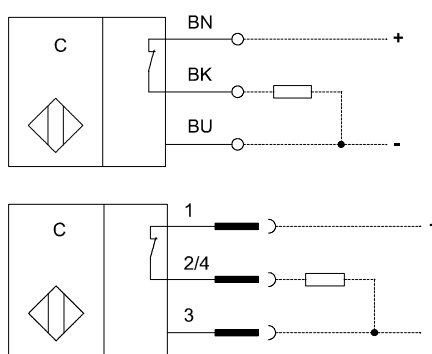


### Wiring diagrams NPN and PNP normally closed / N.C.

NPN - Proximity Switch

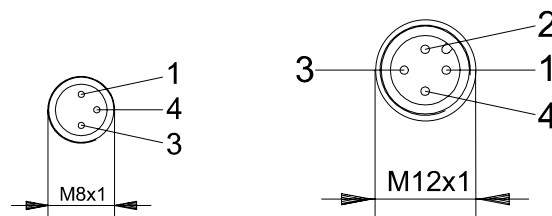


PNP - Proximity Switch



### Male plug M8x1 / M12x1 and corresponding colours

pin number	colour	code
1	brown	BN
2	-	-
3	blue	BU
4	black	BK



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# Technical Data

## Capacitive Proximity Switch

### Identifying characteristics in accordance with EN 60947-5-2

Electrical data		
Rated operating distance	$S_n$	see overview
Mounting		Non flush
Standard target		$3 \cdot S_n \times 3 \cdot S_n \times 1\text{mm}$ ; material: steel; connected to earth
Effective operating distance	$S_r$	see overview $S_r$ adjustable with potentiometer (POT); turn right $\hat{=}$ high sensitivity, turn left $\hat{=}$ low sensitivity
Assured operating distance	$S_a$	$0 \leq S_a \leq 0,8 \cdot S_r$
Switching element function		see overview
Repeat accuracy	R	$\leq 0,1 \cdot S_r$
Differential travel (hysteresis)	H	$\leq 0,2 \cdot S_r$
Frequency of operating cycles	f	$\approx 25\text{Hz}$
Rate operational voltage	$U_e$	12V - 48V DC
Operational voltage range	$U_B$	10V - 60V DC
Rated insulation voltage	$U_i$	75V DC
Rated impulse withstand voltage	$U_{imp}$	500V
Voltage drop	$U_d$	< 3V DC
Utilization category		DC-13(Switching element)
Rated operational current	$I_e$	$\leq 400\text{mA DC}$ $\leq 200\text{mA DC @ M18x1 proximity switch}$
Minimum operational current	$I_m$	$\geq 1\text{mA DC}$
Off-state current	$I_r$	$\leq 0,5\text{mA DC}$
No-load supply current	$I_o$	$\leq 20\text{mA DC}$
Switching element		permanent overload and s.c.p.
Short-circuit protection		pulsed
Rated conditional short-circuit current		100A
Rated supply frequency		DC
False polarity protection		with permutation of +, -, output no damage occurs
Time delay before availability	$t_v$	$\leq 50\text{ms}$

Electromagnetic compatibility (EMC)		
Electromagnetic field test	IEC 61000-4-3	3V/m, 80...1000MHz
Electrostatic discharge test	IEC 61000-4-2	4kV CD, 8kV AD
Electrical fast transient immunity test (Burst)	IEC 61000-4-4	1kV coupling clamp
Impulse voltage withstandability (Surge)	IEC 61000-4-5	500V, 1,2/50 $\mu\text{s}$ @ $R_i = 42\Omega$
Radiated disturbance field strength	EN 55011	$\leq 40\text{dB } (\mu\text{V/m})$

Mechanical Data	
Enclosure	M18x1 and M30x1,5 = PBT black $\varnothing 20$ and $\varnothing 34$ = PBT red
End cap	PA 6.6 black
Ambient air temperature	-25°C ... +70°C
Type of protection	Cable versions: IP67 Male plug versions: M8x1 with plug-in-connector IP65 Male plug versions: M8x1 / M12x1 with screwed plug-in-connector IP67
Pollution degree	3 (Pollution of the active zone can cause impairments of the operating distances.)
Indication	Power ON = LED green Output ON = LED yellow
Termination type	Cable 3x0,5mm <sup>2</sup> x 2m, PVC-outer jacket black Male plug M12x1, PA Male plug M8x1, brass, nickel plated
For attachment	M18x1 and M30x1,5 = hexagon nut PA 6.6 black

EU Conformity	CE
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